

REMARKS

Claims 1-8, 11-13, 15-22, 25-27, and 29 are pending in this application, of which claims 2-8, 12, 13, 16-22, 26, and 27 have been withdrawn from consideration by the Examiner as being drawn to a non-elected species.

Applicant has amended claims 1, 11, 15, 25, and 29, and has canceled claims 10 and 24 (claims 9, 14, 23, and 28 were previously canceled). These changes do not introduce any new matter.

Claim Objection

In response to the objection to claims 10, 11, 24, and 25, Applicant has amended claims 11 and 25 so that each of these dependent claims begins with the word “the” as suggested by the Examiner (as noted above, claims 10 and 24 have been canceled herein). Accordingly, Applicant requests that the objection to claims 11 and 25 be withdrawn.

Rejections Under 35 U.S.C. § 103

Applicant respectfully requests reconsideration of the rejection of claims 1 and 15 under 35 U.S.C. § 103(a) as being unpatentable over *Fukushima et al.* (“*Fukushima*”) (US 5,940,530) in view of *Doi et al.* (“*Doi*”) (US 5,224,177). Applicant has amended independent claim 1 to include the features specified in original claim 10, and has amended independent claim 15 to include the features specified in original claim 24 (as noted above, claims 10 and 24 have been canceled herein). As implicitly recognized by the Examiner, the result of the combination of the *Fukushima* and *Doi* references would not have included each and every feature of present claims 1 and 15. Accordingly, claims 1 and 15, as amended herein, are patentable under 35 U.S.C. § 103(a) over the combination of *Fukushima* in view of *Doi*.

Applicant respectfully requests reconsideration of the rejection of claims 1, 10, 11, 15, 23-25, and 29 under 35 U.S.C. § 103(a) as being unpatentable over *Uchino et al.* (“*Uchino*”) (US 2002/0008771 A1) in view of *Doi* (as noted above, claims 10 and 24 have been canceled

herein, and claim 23 was previously canceled). As will be explained in more detail below, the combination of *Uchino* in view of *Doi* would not have suggested to one having ordinary skill in the art each and every feature of the subject matter defined in independent claims 1, 15, and 29, as amended herein.

The deficiencies of the *Uchino* reference relative to the claimed subject matter are set forth in Applicant's prior paper (see the Amendment filed on November 21, 2007). In support of the obviousness rejection, the Examiner asserts that the *Doi* reference "teaches that the judging section calculates a degree of similarity between the pixel value histogram and a predetermined reference histogram, and makes the second judgment according to the degree of similarity." Final Office Action at page 8.

Applicant respectfully traverses the Examiner's characterization of the *Doi* reference relative to the claimed subject matter. The *Doi* reference discloses as follows:

1) "Therefore, two measures obtained from lung areas in digitized chest images have been selected for the estimation of exposure level, as shown in FIG. 6(a). One measure is the pixel value that yields the 25% fraction of the lower end (higher optical density) of the gray-level histogram of the image. The other is the minimum pixel value (corresponding to the maximum optical density in the lung areas) with non-zero contributions in the main part of the histogram." Column 4, lines 46-55;

2) "Referring again to FIG. 6(a), for density correction of an improperly exposed radiograph with the minimum pixel value below 200 (threshold level corresponding to over-exposure) or above 500 (threshold level corresponding to under exposure), the minimum pixel value of the radiograph is to be converted to approximately the mean of the minimum pixel values obtained from properly exposed radiographs (here corresponding to 350)." Column 5, lines 3-11;

3) “Thus, the curve or look-up table (one of those shown in FIG. 4), which best converts the minimum pixel value in the improperly exposed image to this mean minimum pixel value of 350, i.e., the correction curve closest to the intersection of the original pixel value and the empirically determined corrected pixel value of 350, is chosen as the curve to map the pixel values for pixels throughout the image to the corrected pixel values.” Column 5, lines 11-19;

4) “With this technique, over-exposed images in the range of the minimum pixel value from 0 to 200 are divided into three regions in terms of high, medium, and low pixel values at 25% fraction, as marked by regions H, M, and L, respectively.” Column 5, lines 29-33; and

5) “For density correction of an over-exposed image in the region L, M, and H, the minimum pixel value of the radiograph is converted to the pixel value of 400, 350, and 300, respectively.” Column 5, lines 43-46.

In this manner, according to *Doi*, the minimum pixel value, the low pixel values at 25% fraction, and the mean minimum pixel value of 350 are used. Here, both the minimum pixel value and the low pixel values at 25% fraction are calculated from only the gray-level histogram without using any predetermined reference histogram. Therefore, both the minimum pixel value and the low pixel values at 25% fraction in *Doi* are significantly different from the degree of similarity specified in the claimed subject matter, even if the minimum pixel value and the low pixel values at 25% fraction would seem to be similar to the specified degree of similarity to some extent. Furthermore, the mean minimum pixel value of 350 in *Doi* does not constitute a histogram.

Moreover, with regard to the Examiner’s assertion that *Doi* teaches “that an adjustment processing is based on a pixel value histogram of the image data” (Final Office

Action at page 4), the presently claimed subject matter specifies that the *second judgment* is based on the histogram (see S413, S414, and S415 in Figure 20).

In summary, the *Doi* reference does not teach or suggest a number of features of the presently claimed subject matter, including at least 1) the predetermined reference histogram, 2) calculating the degree of similarity between the pixel value histogram and the predetermined reference histogram, and 3) making the second judgment according to the degree of similarity. The *Uchino* reference does not disclose or suggest the above-listed features 1)-3) either. Thus, for at least the foregoing reasons, the result of the combination of the *Uchino* and *Doi* references would not have included each and every feature of present claims 1, 15, and 29.

Accordingly, independent claims 1, 15, and 29, as amended herein, are patentable under 35 U.S.C. § 103(a) over the combination of *Uchino* in view of *Doi*. Claim 11, which depends from claim 1, and claim 25, which depends from claim 15, are likewise patentable under 35 U.S.C. § 103(a) over the combination of *Uchino* in view of *Doi* for at least the same reasons set forth above regarding the applicable independent claim.

Conclusion

In view of the foregoing, Applicant respectfully requests reconsideration and reexamination of claims 1, 11, 15, 25, and 29, as amended herein, and submits that these claims are in condition for allowance. Accordingly, a notice of allowance is respectfully requested. In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 749-6902. If any additional

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fees are due in connection with the filing of this paper, then the Commissioner is authorized to charge such fees to Deposit Account No. 50-0805 (Order No. MIPFP057.CIP).

Respectfully submitted,
MARTINE PENILLA & GENCARELLA, L.L.P.

A handwritten signature in black ink, appearing to read 'P. B. Martine', with a long horizontal line extending to the right.

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